

Amendments to the Claims

1. (Currently amended) A process of preparing a nanocomposite comprised of a functionalized diene-based elastomer and a 2:1 layered clay comprises blending:

(A) an aqueous dispersion of a functionalized diene-based elastomer having a Tg in a range of about -120°C to about +10°C and a number average molecular weight in a range of about 1,000 to about 1,000,000 g/mole, wherein said functionalized diene-based elastomer is selected from functionalized ~~copolymers of at least one of isoprene and 1,3-butadiene and polyisoprene, functionalized polybutadiene, functionalized copolymers of styrene or alpha methyl styrene~~ with at least one of isoprene and 1,3-butadiene, and styrene-butadiene-glycidal methacrylate terpolymer, and

(B) a particulate 2:1 multi-layered swellable silicate clay;

wherein:

~~——(1)—— said elastomer contains one or more functional groups selected from at least one of acid, acid salt and acid anhydride groups, wherein said aqueous dispersion has a pH in a range of from about 7.1 to about 14 and wherein said clay contains a non-polymeric salt of a quaternary ammonium ion in the galleries between its layers, or~~

~~——(2)——~~ said functionalized elastomers and ~~contains~~ styrene-butadiene-glycidal methacrylate terpolymer are elastomers which contain one or more functional groups as protonated amine modified epoxide groups, wherein said aqueous dispersion has a pH in a range of about 2.5 to about 6.9 and wherein said clay contains at least one cationically exchangeable ion in the galleries between its layers comprised of at least one of sodium, magnesium, potassium and calcium ions.

2. (Currently amended) The process of claim 1 ~~(A) and (B)~~(1) wherein said clay is selected from at least one of smectite, vermiculite and mica clays.

3. (Currently amended) The process of claim 1 ~~(A) and (B)(1)~~ wherein said clay is selected from montmorillonite and/or hectorite clays.
4. (Cancelled)
5. (Cancelled)
6. (Currently amended) The process of claim 1 ~~(A) and (B)(2)~~ wherein said clay contains cationic exchangeable ions in its galleries between its layers comprised of at least one of sodium, magnesium, potassium and calcium ions.
7. (Cancelled)
8. (Cancelled)
9. (Cancelled)
10. (Cancelled)
11. (Currently amended) The process of claim 1 ~~(A) and (B)(2)~~ wherein said functionalized elastomer is an epoxidized elastomer, wherein the said epoxy groups are modified by treatment with a primary or secondary amine selected from at least one of methylamine, ethylamine propylamine, butylamine, dimethylamine, diethylamine, dipropylamine, methylbutyl amine and dialkylaminoalkylamines, followed by the protonation thereof by treatment with an acid selected from boric acid, formic acid, lactic acid, propionic acid, butyric acid, hydrochloric acid, phosphoric acid, sulfuric acid, carbonic acid and acetic acid.
12. (Currently amended) The process of claim 1 ~~(A) and (B)(2)~~ wherein said functionalized elastomer is an epoxidized elastomer selected from expoxidized polyisoprene, epoxidized polybutadiene and epoxidized styrene-butadiene copolymer, wherein the said epoxy groups are modified by treatment with a salt of tertiary amine.
13. (Currently amended) The process of claim ~~[[11]]~~ 1 wherein said ~~epoxidized elastomer~~ functionalized elastomer is selected from epoxidized natural cis 1,4-polyisoprene elastomer, epoxidized-polybutadiene or styrene-butadiene-glycidal methacrylate terpolymer.

14. (Cancelled)
15. (Original) A nanocomposite prepared according to the process of claim 1.
16. (Original) A rubber composite as a blend of said nanocomposite of claim 1 and at least one additional diene-based elastomer.
17. (Currently amended) A rubber composite as a blend of said nanocomposite of claim 1 and at least one additional diene-based elastomer, and additional particulate reinforcing agent and/or coupling agent reinforcement selected from carbon black, amorphous silica and coupling agent, or a combination of carbon black, amorphous silica and coupling agent.
18. (Currently amended) An article of manufacture is having at least one component comprised of ~~said nanocomposite and/or said rubber composite~~ the rubber composite of claim 1.
19. (Currently amended) A tire having at least one component comprised of ~~said nanocomposite and/or said rubber composite~~ the rubber composite of claim 11.
20. (Currently amended) The tire of claim [[6]] 19 wherein said tire component is selected from at least one of a tire tread, tire innerliner and/or tire sidewall.
21. (New) A nanocomposite prepared according to the process of claim 11.
22. (New) A nanocomposite prepared according to the process of claim 12
23. (New) A rubber composite as a blend of said nanocomposite of claim 11 and at least one additional diene-based elastomer.
24. (New) A rubber composite as a blend of said nanocomposite of claim 12 and at least one additional diene-based elastomer.
25. (New) A rubber composite as a blend of said nanocomposite of claim 11 and at least one additional diene-based elastomer, and additional particulate reinforcement selected from carbon black, amorphous silica and coupling agent, or a combination of carbon black, amorphous silica and coupling agent.
26. (New) A rubber composite as a blend of said nanocomposite of claim 12 and at

least one additional diene-based elastomer, and additional particulate reinforcement selected from carbon black, amorphous silica and coupling agent, and carbon black, amorphous silica and coupling agent.

27. (New) An article of manufacture is having at least one component comprised of the rubber composite of claim 23.

28. (New) A tire having at least one component comprised of the rubber composite of claim 23.

29. (New) A tire having at least one component comprised of the rubber composite of claim 24.

30. (New) The tire of claim 28 wherein said tire component is selected from at least one of a tire tread, tire innerliner and/or tire sidewall.

31. (New) The tire of claim 29 wherein said tire component is selected from at least one of a tire tread, tire innerliner and/or tire sidewall.